

Docket No.: 7591 CO1

REMARKS**Japanese Publication # 10-282,410 and 35 U.S.C. 102(b) rejection**

Claims 1-10, 13, 15-19, and 26-29 stand rejected under 35 U.S.C. 102(b) as being anticipated by Japanese Publication #10-282410. Japanese Publication # 10-282,410 (hereinafter "Japanese Publication") discloses a method of leak detection in a selective permeable membrane module in which fluorescent dye solution having a molecular weight of 300 to 3000 is used to detect any fluorescence leaking from defects in the membrane module to identify the leak.

Claim 1 has been cancelled. Claim 2 has been amended. As currently amended, claim 2 is in condition for allowance.

With respect to claim 3, Applicant respectfully traverse Examiner's rejection because Japanese Publication does not mention the particular use of cross-flow or dead-end flow reverse osmosis membrane separation process.

With respect to claims 4-6, Applicant respectfully traverse Examiner's rejection because none of the inert fluorescent tracers listed in the claims are disclosed in the art cited by the Examiner.

With respect to claims 7-9, Applicant has rewritten claims 7-9 in independent form and Applicant respectfully traverse this rejection because this reference does not disclose the introduction of an inert tracer into the feed stream in an amount from 5 ppt to about 1000 ppm (Claim 7), 1 ppb to about 50 ppm (Claim 8), and 5 ppb to about 50 ppb (Claim 9).

With respect to both claim 10 and claim 13, these two rejections are moot because Applicant has cancelled both claims. Claims 11 and 12 have been rewritten in independent form.

With respect to claim 14, claim 14 has been rewritten in independent form.

Docket No.: 7591 CO1

With respect to claim 15, claim 15 has been rewritten to depend on an allowable base claim, claim 14.

With respect to claim 16, Applicant respectfully traverse Examiner's rejection of claim 16 because the cited art does not disclose a method of reverse osmosis membrane separation system wherein a feed stream contacts a reverse osmosis membrane in a cross-flow relative to the reverse osmosis membrane.

With respect to claim 17, Applicant respectfully traverse Examiner's rejection of claim 17 because the cited art does not disclose a method of reverse osmosis membrane separation system wherein a feed stream contacts a reverse osmosis membrane in a flow direction substantially perpendicular to the reverse osmosis membrane.

With respect to claim 18, Applicant respectfully traverse Examiner's rejection because none of the specific inert fluorescent tracers listed in the claims are disclosed in the art cited by the Examiner.

With respect to claim 19, Applicant respectfully traverse Examiner's rejection because the Japanese Publication does not disclose a method of monitoring a reverse osmosis membrane wherein the inert tracer is measured in an amount ranging from about 5 ppt to about 1000 ppm.

With respect to Claim 26, Applicant respectfully traverse Examiners rejection because the Japanese Abstract does not disclose the use of a "fluorometer to detect the fluorescent signal of the inert tracer ranging from 5ppt to about 1000ppm in at least one of the feed stream...." (Claim 26.) (Emphasis added).

Claims 27-30 depend upon Claim 26, an allowable base claim.

Applicant requests that Examiner withdrawal his rejection and issue a Notice of Allowance for the rejected claims.

Docket No.: 7591 CO1

B. 35 U.S.C. 103 rejection

Claims 1-30 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Hoots et al, U.S. patent no. 5,435,969 in view of Al-Samadi, U.S. patent no. 6,113,797, *and* if necessary in view of Richardson et al, U.S. patent no. 5,242,602. Applicant respectfully traverses this rejection for the below-mentioned reasons.

1. Hoots et al. in view of Al-Samadi

Hoots' discloses a manner of monitoring and regulating in-system concentrations of water treatment agents and system operating parameters. Specifically, Hoots discloses a water treatment monitoring methodology, which utilizes a *water treatment agent concentration indicator*. The water treatment concentration indicator is formed via the combination of an incipient reagent (inert tracer) and a water treatment agent (WTA). WTA-concentration indicator has a fluorescent characteristic that can be correlated to the value of WTA's in-system concentration.

Al-Samadi discloses a method of water purification. In particular, Al-Samadi discloses a two-stage high pressure high recovery process utilizing two reverse osmosis membrane systems intended to provide very high overall water recoveries. This system answers the need for an improved, economical process for purification of water which provides high water recoveries, even in excess of 99%, while preventing formation of scale on the RO or nanofiltration (NF) membrane surfaces, and thus prolonging the useful life of such membranes.

Applicant's disclose a method of monitoring and controlling a reverse osmosis membrane separation process via the use of an inert fluorescent tracer. Monitoring a reverse osmosis system presents many challenges. More specifically, "[a] challenge in monitoring systems such as the reverse osmosis examples cited above is that there is a limited number of places where sampling and monitoring can occur, namely the feed, permeate and concentrate streams." (page 10 of the application's specification).

Docket No.: 7591 CO1

Unlike Hoots, monitoring and regulation is derived solely from fluorescent tracer levels as opposed to relying on a concentration indicator. Thus, not all aspects of the present invention are disclosed in both references and a prima facie case for non-obviousness is not made.

Assuming arguendo that all elements of the invention were disclosed, a prima facie case for obviousness does not exist because there is no motivation to combine the two references. In order for a rejection under 35 U.S.C. 103 to succeed, there must be a motivation in the art to combine the two references cited by the Examiner. The motivation to combine references cannot come from applicant(s) disclosure (otherwise known as hindsight reconstruction). There is no motivation in the art to combine Hoots and Al-Samadi because the technologies discussed in each respective patent are distinct from one another. In particular, Hoots discloses a monitoring and regulation technique for water treatment agents, as opposed to Al-Samadi which discloses novel water purification process. Examiner's only motivation to combine these two references could only come from the disclosure itself.

2. Hoots et al. in view of Al-Samadi and in view of Richardson et al.

Richardson discloses a method of determining the amount of performance indicators, water treating components, via the analysis of proportional amounts of inert tracers which can be analyzed by absorbance or emission spectra. It does not mention the use of inert fluorescent tracers.

Richardson adds nothing more to Examiner's basis for a non-obvious rejection because it neither discloses the use of inert fluorescent tracer nor does it provide any motivation to combine the references.

Applicant requests that Examiner withdrawal his rejection and issue a Notice of Allowance for the rejected claims.

Docket No.: 7591 CO1

NON-STATUTORY DOUBLE PATENT REJECTION

The U.S. Patent Application No. 10/109,256, filed on March 28, 2002 is commonly owned by Nalco Company {formerly known as Ondo Nalco Company, formally known as Nalco Chemical Company}. Therefore, the requirement of "common ownership" of the pending patent application is present in this matter.

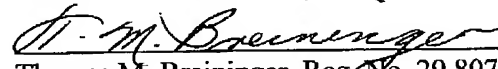
With a timely filed terminal disclaimer herein submitted, in compliance with 37 C.F.R. 1.321(c), concurrently with this Response, Applicants request withdrawal of this rejection and that a Notice of Allowance be sent for all pending claims.

Docket No.: 7591 CO1

CONCLUSION

Applicants submit that based upon the above Remarks all pending claims are in condition for allowance and respectfully requests that a Notice of Allowance be sent for all pending claims.

Respectfully Submitted,



Thomas M. Breining, Reg. No. 29,807
Nalco Company
Patent and Licensing Department
1601 West Diehl Road
Naperville, IL 60563-1198

Date: